

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 2001-118008

(43)Date of publication of application : 27.04.2001

(51)Int.Cl.

G06F 19/00

(21)Application number : 11-293375

(71)Applicant : HITACHI LTD

(22)Date of filing : 15.10.1999

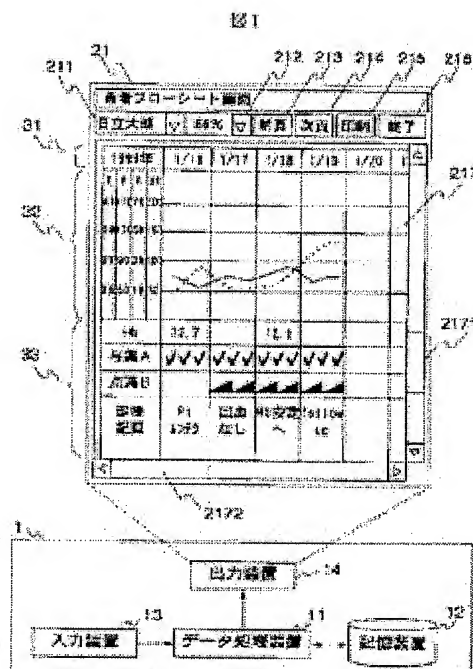
(72)Inventor : SASAKI HAJIME
SETO KUMIKO
MATSUO HITOSHI

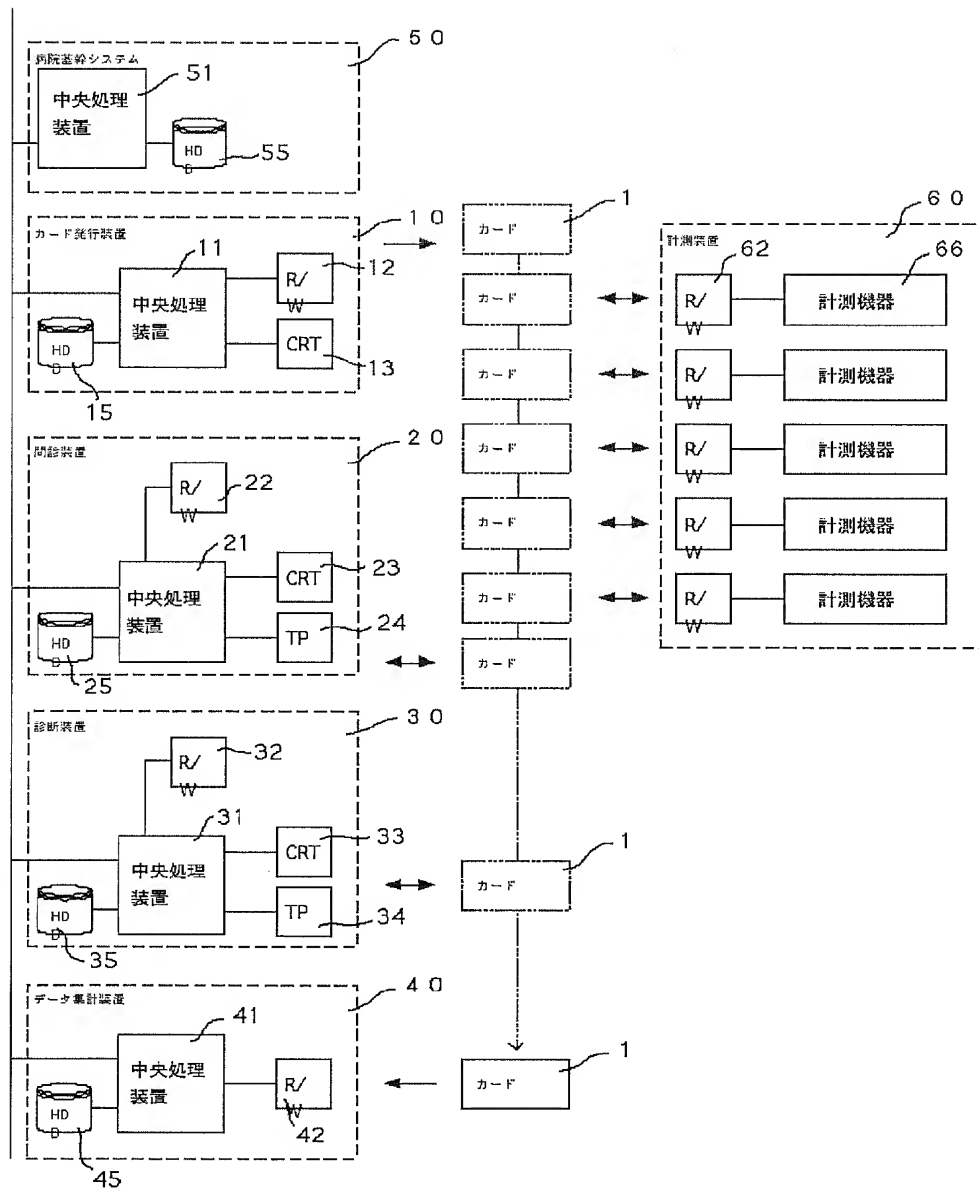
(54) ELECTRONIC CLINICAL CHART SYSTEM

(57)Abstract:

PROBLEM TO BE SOLVED: To list and display graphs, character strings, figure symbols, etc., of patient data by arranging them at positions that common time-base coordinate indicates.

SOLUTION: Graphs, character strings, figure symbols, etc., showing thermometric data, examination data, medical consultation record data, nursing record data, or care plan data regarding a specified patient are arranged and displayed in a graph area 32 or an area 33 of a table on the basis of data of dates and times that respective data items have according to time-base coordinates that a time-base area 31 displayed on the screen of a display device indicates.





[Drawing 11]

ヤマト タロウ 様

質問1) 今までにかかった病気をタッチしてください

なし	肺炎	結核	高血圧	高脂血症
心疾患	胃潰瘍	十二指腸潰瘍	肝炎	腎臓病
糖尿病	貧血	その他	次に進む	

CLAIMS

[Claim(s)]

[Claim 1] Have an input device, a display device, memory storage, and a processing unit, and the above-mentioned memory storage, Two or more kinds of patient data, such as temperature taking data, inspection information, medical-records data, nurse's record data, or care planning data prepared about two or more patients' each, is memorized, Each of the above-mentioned patient data to each patient time series information at a recording date or the time of a measurement date or the scheduled day including two or more given data elements, respectively the above-mentioned processing unit, A graph with which the above-mentioned temperature taking data or the above-mentioned inspection information is expressed about the above-mentioned patient data about one of patients, A character string or a graphic symbol showing the above-mentioned temperature taking data, the above-mentioned inspection information, the above-mentioned medical-records data, the above-mentioned nurse's record data, or the above-mentioned care planning data, etc., An electronic chart system which has a means to display on a position corresponding to common time base coordinates set up on a screen of the above-mentioned display device based on the above-mentioned time series information.

[Claim 2] The above-mentioned means which displays is in a state which displayed the above-mentioned graph, the above-mentioned character string, or the above-mentioned graphic symbol on a screen of the above-mentioned display device, After an operator specifies the range of the above-mentioned time base direction on a screen using the above-mentioned input device, When it points to change of a display scale and a desired display scale is inputted, The electronic chart system according to claim 1 which changes as an operator specified a display scale of a time base direction of the above-mentioned designated range, interlocks the above-mentioned graph, the above-mentioned character string, and the above-mentioned graphic symbol with a display scale after the above-mentioned change, and changes and displays a position.

[Claim 3] The above-mentioned means which displays is in a state which displayed the above-mentioned graph, the above-mentioned character string, or the above-mentioned graphic symbol on a screen of the above-mentioned display device, After an operator chooses the above-mentioned graph, the above-mentioned character string, or the above-mentioned graphic symbol on a screen using the above-mentioned input device, When it points to a display of an individual screen, Based on the above-mentioned graph, the above-mentioned character string, or the above-mentioned graphic symbol specified by the above-mentioned operator, an individual screen about either the above-mentioned temperature taking data, the above-mentioned inspection information, the above-mentioned medical-records data, the above-mentioned nurse's record data or the above-mentioned care planning data. Claim 1 to display and the electronic chart system according to claim 2.

[Claim 4] The above-mentioned means which displays is in a state which displayed the above-mentioned graph, the above-mentioned character string, or the above-mentioned graphic symbol on a screen of the above-mentioned display device, When it points to a display of a data

input screen after an operator chose a part on a screen, Claim 1, Claim 2 which display a data input screen about either the above-mentioned temperature taking data, the above-mentioned inspection information, the above-mentioned medical-records data, the above-mentioned nurse's record data or the above-mentioned care planning data based on a position on a screen of a part which the above-mentioned operator chose. And an electronic chart system given in either of Claim 3.

DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to the electronic chart system suitable for health care professionals, such as a medical practitioner and a nurse, using which processes the patient information saved as an electronic file.

[0002]

[Description of the Prior Art] At the medical spot, in order for health care professionals, such as a medical practitioner or a nurse, to perform suitable medical practice or a nursing action etc., it is required to grasp a patient's actual condition and progress correctly. A patient's actual condition and progress were referred to by referring to a variety of record documents conventionally. The inspection result paper with which the inspection results etc. were specifically indicated to be the medical-records documents which are called a clinical recording, and in which the patient's progress, medical practice, etc. were recorded, and the nurse's record documents in which the patient's progress or a nursing action etc. was recorded by the nurse, a medical imaging film, etc. are included. Not only the record written to be said record documents to paper but a voice information and moving image information besides still picture information, such as said medical imaging film, may be included.

[0003] However, when record documents are packed altogether, are filed and are managed for every patient in the above-mentioned method, When only the health care professionals of one person or a small-number name can refer to it simultaneously but medical-records documents, nurse's record documents, an inspection result paper, a medical imaging film, etc. are conversely managed collectively for every patient separately, The problem of the antimony that it will be necessary to search separately, respectively to refer to all the information about a patient was included.

[0004] In order to solve the above-mentioned problem, the patient information currently recorded on the above-mentioned record documents is memorized to memory storage suitable as an electronic file, and the electronic chart system which uses this by computer is developed. Such electronic patient information is also called an electronic chart, and can be referred to using the input/output device of two or more computers connected in the network. Two or more health care professionals could refer to patient information simultaneously by this, and it became possible to also reduce the time and effort of information retrieval substantially further.

[0005] Generally, the electronic chart about each patient contains two or more data of a different

classification. For example, it is classified into two or more data of different classification, such as temperature taking data, inspection information, medical-records data, nurse's record data, or care planning data, and memorizes in the computer. Below, these data aggregates of the patient may be called patient data. Each patient data consists of two or more data elements put in order by the time series about the same patient.

[0006]An operator specifies a patient by the input of a name of patient or a patient identification code to see the patient data of the specific kind about the patient.

Then, the kind of patient data to see is specified.

The data element of a different date from which the specified kind of the patient of patient data constitutes the patient data by the operation arranges in order of the date, and is displayed. The data of time is also contained in each data element, and the operator should just perform page change of a screen, or operation of a screen scrolling until the data element of desired time is displayed on a display device. By these operations, the operator can refer to the patient data of the kind of request about a desired patient.

[0007]When an operator wants to see progress of the temperature taking data about a certain patient, or inspection information about the above-mentioned electronic chart, For example, the system which displays the graph screen which drew based on the information on the time of the specified data element and the numerical value about the patient whom the operator specified in the field where a horizontal axis expresses time and a vertical axis expresses a numerical value is also proposed. When an operator specifies two or more kinds of data elements, the system which displays the graph of two or more kinds of data elements on one screen in piles is also proposed. The system of icons, such as a triangle, a quadrangle, or a check mark, expressing the number of execution time, execution time, etc., and displaying them together with the above-mentioned graph also, for example about the enforcement data of a drop by drop titration or injection also except the above-mentioned temperature taking data or inspection information is also proposed and used. With the system which displays the above-mentioned graph screen, the operator can refer to progress of the patient data of the kind of request about a desired patient in the form of [which is easy to grasp intuitively] a graph or a graphic symbol.

[0008]The period over two or more days concerning [an operator] a certain patient about the above-mentioned electronic chart, To look through and carry out the comparative examination of the data element of two or more kinds of patient data, for example, temperature taking data, inspection information, medical-records data, nurse's record data, or care planning data. The system which displays the screen of the table which constituted the same kind of data element from a procession of the cell which displayed the data element of the same date as the cell of the same line on the cell of the same sequence, and was arranged in order of the date about two or more kinds of specified data elements about the patient specified by an operator is also proposed. With the system which displays the screen of the above-mentioned table, by looking through and carrying out the comparative examination of the data element of two or more kinds of patient data of the period over two or more days about the patient, the operator can associate and grasp progress of two or more kinds of patient data, and can use for diagnosis.

[0009]

[Problem to be solved by the invention]Although the system which displays the above-mentioned graph screens, such as body temperature, by the above-mentioned electronic chart, and the system which displays the screen of the above-mentioned table of a data item over two or more items of two or more days were proposed in the known art which includes the above-mentioned example in the first place, the above-mentioned graph screen and the screen of the above-mentioned table were not able to be referred to simultaneously. For example, when an operator displays the data element contained in a certain patient's medical-records data on a display device and the view considered to be important in the data element is observed, liking to see graphs, such as body temperature before and behind the date the view was indicated to be, often arises. In this case, in the conventional electronic chart system, an operator specifies the kind of graph screen, after performing operation changed from the screen of a table to a graph screen, needs to change a page or needs to scroll a screen until the part of the request on a graph is displayed. The above-mentioned operation requires time, and also in order that the operator may judge whether the desired screen was displayed, having to see a screen, the efficiency of comparison reference falls [an operator] fatigue easily sensitively.

[0010]Densities of recorded information, such as the number of times of temperature taking or the number of inspections, and recording quantity of a view, change [second] with a patient's condition. However, according to the density of the above-mentioned recorded information, the display scale of the time base direction of the above-mentioned graph screen was being fixed, and it was impossible to have changed freely and to have displayed in the whole or a specific range. It was impossible to have changed freely the width of the frame with which the date of the screen of the above-mentioned table is expressed according to the density of the above-mentioned recorded information, and to have displayed it in the whole or a specific range. In this case, when the body temperature graph for two weeks about a certain patient shows the graph screen which can be referred to on one screen in the conventional electronic chart system, for example, although it is 1 to [per] about 3 times of the number of times of temperature taking, day usually, Supposing there is a day which measured body temperature for every hour only one day in a display period for sudden change, on the above-mentioned graph screen, it is difficult for an operator to read change of the body temperature of a day with sudden change in detail. While displaying the screen of the above-mentioned table about the view or enforcement matter over the same period about the patient, supposing the day with sudden change records the view of one 5 times [usual] the quantity of this, on the screen of the above-mentioned table, it is difficult to display all the views of a day with sudden change within the narrow limit.

[0011]An operator in for example, the state where the above-mentioned graph screen or the screen of the above-mentioned table is displayed. [third] The operator needed to perform [the case where he would like to display the history of only a specific kind of patient data on the whole screen, and to examine it in detail, or] operation which specifies the kind of the individual screen about the patient data of a desired kind, or input screen, and changes a screen to input a specific kind of patient data. When the above-mentioned individual screen is furthermore displayed, it is

necessary to change a page or to scroll a screen until the part of the request in an individual screen is displayed. The above-mentioned operation requires time, and also in order that the operator may judge whether the desired screen was displayed, having to see a screen, the efficiency of work falls [an operator] fatigue easily sensitively.

[0012]Therefore, the purpose of this invention is to provide the electronic chart system which can input or refer to the patient data element of two or more kinds by easier operation.

[0013]The still more concrete purpose of this invention is to provide the electronic chart system with which the patient data element of two or more kinds is arranged in on a screen based on the kind of patient data, and the information on time, it indicates by package and an operator can grasp progress of a patient's condition easily.

[0014]The still more concrete purpose of this invention is in the state which shows the screen which indicated [above-mentioned] by the package, Even if the display scale in the whole time base direction or specific range specified by an operator can be changed freely and the density of recorded information, such as the number of times of temperature taking and quantity of a view, changes, it is providing the electronic chart system with which an operator can read the above-mentioned patient data easily.

[0015]The still more concrete purpose of this invention is in the state which shows the screen which indicated [above-mentioned] by the package, and is providing the electronic chart system which can display the desired individual screen or input screen of patient data of a kind by easier operation, and can reduce operations of screen switching or a screen scrolling substantially.

[0016]

[Means for solving problem]In order to solve an aforementioned problem, in the electronic chart system of this invention, a processing unit performs the following processings.

[0017]The graph with which temperature taking data or inspection information is expressed about the above-mentioned patient data about one of patients, It displays on the position corresponding to the common time base coordinates which set up a character string or a graphic symbol showing temperature taking data, inspection information, medical-records data, nurse's record data, or care planning data, etc. on the screen of a display device based on the time series information which each data element has.

[0018]Where the above-mentioned graph, the above-mentioned character string, or the above-mentioned graphic symbol is displayed on the screen of the above-mentioned display device, After an operator specifies the range of the above-mentioned time base direction on a screen using the above-mentioned input device, When it points to display scale change and a desired display scale is inputted, it changes as the operator specified the display scale of the time base direction of the above-mentioned designated range, and the above-mentioned graph, the above-mentioned character string, and the above-mentioned graphic symbol are interlocked with the display scale after the above-mentioned change, and a position is changed and displayed.

[0019]Where the above-mentioned graph, the above-mentioned character string, or the above-mentioned graphic symbol is displayed on the screen of the above-mentioned display device, After an operator chooses the above-mentioned graph, the above-mentioned character

string, or the above-mentioned graphic symbol on a screen using the above-mentioned input device, When it points to the display of an individual screen, Based on the above-mentioned graph, the above-mentioned character string, or the above-mentioned graphic symbol specified by the above-mentioned operator, the individual screen about either the above-mentioned temperature taking data, the above-mentioned inspection information, the above-mentioned medical-records data, the above-mentioned nurse's record data or the above-mentioned care planning data is displayed.

[0020]Where the above-mentioned graph, the above-mentioned character string, or the above-mentioned graphic symbol is displayed on the screen of the above-mentioned display device, When it points to the display of a data input screen after the operator chose the part on a screen, Based on the position on the screen of the part which the above-mentioned operator chose, the data input screen about either the above-mentioned temperature taking data, the above-mentioned inspection information, the above-mentioned medical-records data, the above-mentioned nurse's record data or the above-mentioned care planning data is displayed.

[0021]

[Mode for carrying out the invention]Hereafter, the electronic chart system concerning this invention is explained in detail with reference to the embodiment shown in Drawings.

[0022]The electronic chart system 1 is provided with the following in drawing 1.

A keyboard or the data input unit 13 like a mouse which receives an operational input and data input.

Patient data.

Screen format data.

Print format data, the memory storage 12 like a magnetic disc memory which memorizes a program etc., the output unit 14 like the CRT display which displays data on a screen, and the data processing equipment 11 which processes data according to a program and controls operation of a system.

Although the output unit 14 also contains the printer for printing patient data, it omits explanation here for simplification. Even if the output unit 14 is not a CRT display, it may be added to it, and it may include the combination of the printer which outputs information to the liquid crystal touch panel or paper which was united with the input device 13, the speaker which outputs a voice information, or the above-mentioned equipment. the input device 13 has not been a mouse and a keyboard, either -- it is -- it may add to it and the combination of a pen tablet, the above-mentioned liquid crystal touch panel which was united with the output unit 14, the microphone which inputs a voice information, the camera which inputs picture information, or the above-mentioned equipment may be included.

[0023]This electronic chart system 1 performs the following processings under control of the program memorized by the memory storage 12. It cannot be overemphasized instead of using this program that a logic circuit for exclusive use may be provided and an equivalent function may be realized.

[0024]If the above-mentioned program is started as shown in drawing 2, according to the format

data first stored in the memory storage 12, the display screen 21 which is illustrated to drawing 1 will be displayed on the output unit 14 (Procedure 400). The graph with which the above-mentioned display screen 21 expresses temperature taking data or inspection information, A character string or a graphic symbol showing temperature taking data, inspection information, medical-records data, nurse's record data, or care planning data, etc., Based on the time series information which each patient data has, it shall display on the position corresponding to the common time base coordinates set up on the screen, and shall be hereafter called the patient flow plan screen 21. In the patient flow plan screen 21, the name-of-patient column 211, the display magnification column 212, the front page display button 213, the next page display button 214, the print button 215, the processing end button 216, and information displaying region 217 grade are contained.

[0025]The name-of-patient column 211 will display a drop down list, if the drop down button (**) located in the right-hand side in it, for example is chosen. The patient's already registered name is contained in the drop down list. A desired patient can be chosen now out of the list. The menu which directs operation of registering a new patient is also included in this name-of-patient column 211. The magnification column 212 will display a drop down list, if the drop down button (**) located in the right-hand side in it, for example is chosen. Magnifications, such as already registered 100%, 80%, or 66 etc.%, are contained in the drop down list. Desired magnification can be chosen now out of the list. Desired magnification can also be numerically set to this magnification column with a keyboard. When there is not sufficient area for the screen of the information displaying region 217, like drawing 1, trimming of some screens is carried out and it is displayed, and it has come to be able to carry out scroll ** of the screen by the vertical scroll bar 2171 and the horizontal scroll bar 2172. Selection of the print button 215 will print the patient flow plan screen 21 from a printer. When printed, a patient flow plan screen makes periods, such as two etc. weeks, 1 page, and it may be displayed for every page so that it may be legible, but a display page can be changed in that case by choosing the front page display button 213 and the next page display button 214.

[0026]According to the embodiment of this enforcement, the patient data to each patient remembered by the memory storage 12 contains temperature taking data, inspection information, medical-records data, nurse's record data, care planning data, etc. These data is generated to each patient and the patient's identification information (patient ID) is contained in each of two or more patient data to each patient.

[0027]Temperature taking data contains two or more data elements, such as a patient's body temperature, a pulse, a breathing rate, diastole blood pressure, or systole blood pressure, The contents as which the nurse etc. inputted the coded data acquired by daily temperature taking add to the patient's temperature taking data as a new data element, and are memorized. The date and time which carried out that temperature taking are added to this new data element as date data of that data element. Similarly, inspection information contains two or more data elements showing each result of two or more inspections carried out on a different day to the patient. Each data element contains the date and time which performed the corresponding inspection as date

data of the data element. Whenever it examines a patient with a medical practitioner, the contents of a medical examination, the view, or the enforcement matter which the medical practitioner inputted etc. adds medical-records data to the patient's medical-records data as a new data element, and it is recorded. The date and time which inputted the contents of a medical examination are added to this new data element as date data of that data element. Similarly, nurse's record data contains two or more nurse's record data elements inputted under a different date about the patient. Each data element contains the date and time which inputted nurse's record as date data of the data element. Similarly, care planning data includes the care planning data element about two or more medical examination and nursing which were inputted under a different date about the patient. Each data element contains the date and time which are planning implementation of the care as date data of the data element.

[0028]Where the clinical recording display screen 21 is displayed now, an operator, If a name of patient is inputted by the name-of-patient column 211, the graph, graphic symbol, or character string about two or more kinds of patient data elements beforehand defined among the patient data of two or more above-mentioned kinds about the patient will be displayed on the information displaying region 217.

[0029]The patient flow plan displayed on the above-mentioned viewing area 217 comprises the time-axis field 31, the graph field 32, and the field 33 of a table.

[0030]A time-axis and a display scale are displayed on the time-axis field 31. The time base coordinates which this time-axis and a display scale show are applied in common with the whole patient flow plan including the graph field 32 and the field 33 of a table. Like the example shown in drawing 1, it is good also considering the graduation line of the time-axis field 31 only as a pause of the date.

[0031]Data elements, such as temperature taking data about the patient or inspection information, are displayed on the graph field 32 in graphs, such as a line graph and a plot. Although the date data which each data element has includes the information on a date and time, a graph is drawn according to the time base coordinates which the display scale displayed on the time-axis field 31 shows. As shown in drawing 1, the ruled line as a graduation line of the direction of a time-axis field is coincided with the graduation line displayed on the time-axis field 31, and may be displayed. Whether graphical representation of which kind of data element is carried out shall set up beforehand, and it makes a setting variation possible also in a display. The graph of the data element of two or more kinds can also be displayed in piles, and setting out of the kind of the kind of graph, a color, or line, the maximum, the minimum or scale resolution of numerical shaft orientations, etc. is enabled for every data element.

[0032]Data elements, such as temperature taking data about the patient, inspection information, medical-records data, nurse's record data, or care planning data, are displayed on the field 33 of a table with a character string or a graphic symbol. Although the date data which each data element has includes the information on a date and time, according to the time base coordinates which the display scale displayed on the time-axis field 31 shows, the above-mentioned character string or the above-mentioned graphic symbol is drawn. It also makes it possible to constitute the same

kind of data element in the cell of the same line from a procession of a cell which displayed the data element of the same date on the cell of the same sequence, and arranged it in order of the date, and to display it on it so that it may illustrate to drawing 1. At this time, it is made in agreement with the ruled line of a pause of the date in the field 33 of a table, and the graduation line of the date in the time-axis field 31, and may display. Although data items, such as a numerical value, a view, or a plan, may be displayed by a character string, as medicine continued and prescribed for the patient, such as medication or a drop by drop titration, is shown in drawing 2, it may display using a check mark, a graphic symbol, etc. using the field 33 of a table. When displaying character strings, such as medical-records data, nurse's record data, or care planning data, on the field 33 of a table, As shown in drawing 3 (a), the data element within a time contained in the same cell may be displayed side by side sequentially from a top, and as shown in drawing 3 (b), it may arrange and display on the position corresponding to the time base coordinates which the time-axis field 31 shows based on the information on the time of each data element. Like drawing 3 (c), the character string may be indicated by vertical writing, and it may arrange and display on the position corresponding to the time base coordinates which the time-axis field 31 shows based on the information on the time of each data element. The item of "others" etc. may be set up, for example and the patient data of two or more kinds other than an item on display may be displayed on the same cell. By recording the information on the range which the operator specified at the time of an input according to patient data, when it is difficult to display all the character strings of the recorded information on the field of a table about medical-records data, nurse's record data, etc. especially, It may be made to display only the character string of the range specified by an operator.

[0033]As mentioned above, in this embodiment, so that it may understand an operator, With the time series graph of the temperature taking data or inspection information shown directly, change of a patient's health condition. Since a comparative examination can be carried out looking through required information, including other temperature taking data, inspection information, medical-records data, nurse's record data, or care planning data, it becomes possible to grasp a patient's actual condition and progress correctly quickly.

[0034]It returns to drawing 2 and the input of operation from an operator is stood by in the operational input reception procedure 401. The operator can perform the following operation, where the patient flow plan screen 21 is displayed. For example, they are operation of operation of the vertical scroll bar 2171 and the horizontal scroll bar 2172, operation of the name-of-patient column 211, operation of the magnification column 212, the front page display button 213, and the next page display button 214, operation of the print button 215, operation of the processing end button 215, etc. Operation of the time-axis scale changing instruction of a patient flow plan, individual screen-display directions of specification patient data, or the input screen display instruction of specification patient data is also received by the method beforehand set up besides the above-mentioned operation.

[0035]In the distinction procedure 402, and 403 and 404, when an operator does a certain operation, it is distinguished whether the operation is the above-mentioned time-axis scale

changing instruction, or they are the above-mentioned individual screen-display directions, it is the above-mentioned input screen display instruction, or they are other directions. If the operation is the above-mentioned time-axis display scale changing instruction, time-axis scale change procedure 412 will be performed. If the operation is the above-mentioned individual screen-display directions, individual screen-display procedure 413 will be performed. If the operation is the above-mentioned input screen display instruction, input screen display procedure 413 will be performed. When the operation is not any of the above-mentioned time-axis display scale changing instruction, the above-mentioned individual screen-display directions, and the above-mentioned input screen display instruction, either, the operation distinguishes further whether it is operation of the processing end button 216 (Procedure 405). When the operation is operation of processing end button 216 **, a display of a patient flow plan is ended, but when that is not right, a display of a screen is changed according to the operation (Procedure 406). For example, when the directions are operation of the print button 215, a patient flow plan is printed according to a printing format set up beforehand. When the operation is operation of the scroll bar 2171 or 2172, a screen is scrolled according to the operation. When the operation is selection of a specific section of the time-axis field 31 in a screen, highlighting of the selected section is carried out. When the operation is a character string, a graph, or a graphic symbol in a screen, highlighting of the selected character string, graph, or graphic symbol is carried out. Then, processing returns to the operational input reception procedure 401, and stands by an operator's next input.

[0036]When the present operation is judged to be time-axis scale changing instruction as a result of a judgment in Procedure 402, time-axis scale change procedure 412 is performed. In this case, the operator needs to specify the starting point and a terminal point of a period to change a time-axis scale into by the last operation. For example, an operator presupposes that 18 days after January 17 were specified by the input means 13 of a mouse etc. as a period which wants to change a display scale in the time-axis field 31 of a patient flow plan. At this time, highlighting of for two days from January 17 in the time-axis field 31 to the 18th is carried out like an example shown in drawing 4 (a). Although highlighting is carried out by making a closing line of a specified interval thick in an example of drawing 4 (a), the section may be displayed in white or it may display in another color. Then, a procedure of the time-axis scale change procedure 412 is performed by performing operation set as time-axis scale changing instruction, for example, operation which chooses with a mouse etc. either of the both ends of a section frame by which highlighting was carried out. The above-mentioned time-axis scale changing instruction may perform an operational input by a double click or a right-click of operation which did not consider it as selection of the above-mentioned section frame, but also registered ** beforehand, for example, a mouse, and may newly provide a button of time-axis scale changing instruction. After operating the above-mentioned time-axis scale changing instruction, an operator is changing section width by dragging either of the both ends of a specified interval with a mouse etc., as shown, for example in drawing 4 (b), and can set up width of a specified interval to change arbitrarily. It may point to change of a time-axis scale in displaying a dialog box for a magnification

input and inputting twice, 3 times or 0.5 time, and display magnification by a keyboard etc.

[0037]The processing group in the time-axis scale change procedure 412 is shown in drawing 5. In the time-axis scale change procedure 412, the change section reading procedure 4121 is performed first. The change section already specified by the operator is read in Procedure 4121. It omits about the procedure of an input receptionist, or the procedure corresponding to an unsuitable input. Next, the time-axis scale after change of a specified interval which the change scale reading procedure 4122 was performed and was calculated from the width or display magnification after change which the operator specified by the above-mentioned method is read. The screen redisplay procedure 4123 is performed, based on the above-mentioned change section and the time-axis scale after change, it is changed by the time-axis scale as the operator directed, and with the time-axis field 31. According to the time base coordinates after change, redisplay of a graph, a character string, or a graphic symbol of patient data currently displayed on the graph field 32 and the field 33 of the table is carried out altogether. The example of the display screen of a patient flow plan changed by the above-mentioned processing is shown in drawing 4 (c). Drawing 4 (c) is an example of the screen which expanded and displayed three days from January 17 which is the section specified in the example of drawing 4 (a) to the 19th on the width of the request of the operator who specified in the example of drawing 4 (b). Although it redivided with the dashed line and displays by eight time bases in the example of drawing 4 (c) in the section which carried out the enlarged display, the display interval of the ruled line of a patient flow plan or an auxiliary conductor may be automatically changed by the size of the display scale of a time base direction. When the patient flow plan divided per day is selectively reduced to a time base direction, the example which was redivided per seven days and was displayed is shown in drawing 6. As a means to, change the display scale of a time base direction on the whole, The means which can perform specification which applies the set-up display contraction scale to the whole after the procedure of providing the magnification column 212 shown in drawing 1 and the same time-axis scale column, and changing a time-axis scale selectively also as setting out of the magnification of a time-axis being possible may be formed. After this procedure 412 is completed, programmed control returns to the operational input reception procedure 401, and stands by an operator's next input.

[0038]As mentioned above, by changing arbitrarily the portion or the whole of a display scale of the above-mentioned patient flow plan in this embodiment so that it may understand, [of a time base direction] When the patient data storage density at the time of patient sudden change, etc. is high, or when the patient data storage density after leaving hospital etc. is low, a means to be always easy to grasp patient data can be provided.

[0039]It returns to drawing 3, and when the present operation is judged to be individual screen-display directions as a result of the judgment in Procedure 403, individual screen-display procedure 413 is performed. In this case, the operator needs to specify a character string, a graph, or a graphic symbol showing patient data to display an individual screen on, etc. by the last operation. For example, an operator presupposes that the patient record on January 16 was chosen in the patient flow plan as patient data to display an individual screen on. At this time,

highlighting of the selected character string is carried out by changing a bold letter or a color etc. Then, the procedure of the individual screen-display procedure 413 is performed by performing operation which double-clicks with a mouse etc. the character string which was set up as individual screen-display directions, and by which operation, for example, highlighting, was carried out [above-mentioned].

[0040]The processing group in the individual screen-display procedure 413 is shown in drawing 7. In the individual screen-display procedure 413, the indicative-data specific procedure 4131 is performed first. In Procedure 4131, the kind and time of the patient data in which the operator is asking for the display of an individual screen are acquired from the display position of a character string, a graph, or a graphic symbol etc. which are already specified by the operator. Next, the individual screen where the individual screen-display procedure 4132 is performed, the individual screen of the patient data corresponding to the kind of patient data specified by an operator is displayed, and the patient data of the time specified by an operator is displayed is displayed. The display example of an individual screen is shown in drawing 8. In the individual screen 51, the name-of-patient column 511, the display end button 512, the information displaying region 513, etc. are included. In this example, it is displayed in the state where it was set up so that the description on January 16 in the individual screen 51 of medical-records data specified by an operator might come to the head of a screen. If an individual screen is displayed, the individual menu manipulation input receptionist procedure 4133 will be performed, Through the distinction procedure 4134, the individual screen redisplay procedure 4135 is performed according to an operator's operational input, and even Procedures 4133-4135 are repeated until the display end button 512 is operated and it ends the display of the individual screen 51. The details of processing to Procedures 4133-4135 are omitted. The individual screen 51 may carry out a switching display by using the patient flow plan screen 21 as the same screen, and may display both screens in parallel in another window. when changing and displaying both screens, an operator operates the display end button 512 and terminates the display of the individual screen 51 -- control of a program -- the patient flow plan screen 21 -- returning (Procedure 401). When displaying both screens in parallel, an operator should just specify a controlled object with a mouse etc., and even if the individual screen 51 is displayed, when the patient flow plan screen 21 is chosen, it returns to Procedure 401.

[0041]As mentioned above, in this embodiment, the individual screen about the patient data of a desired kind can be easily displayed by choosing a character string, a graph, or a graphic symbol with the above-mentioned patient flow plan so that it may understand. By arranging in parallel and displaying the above-mentioned patient flow plan screen and the above-mentioned individual screen, it becomes possible to understand comparing the details about the patient data of the overall outline of patient progress, and a specific kind.

[0042]It returns to drawing 3, and when the present operation is judged to be input screen display instruction as a result of the judgment in Procedure 404, input screen display procedure 414 is performed. In this case, although the operator needs to specify a character string, a graph, or a graphic symbol showing patient data to display an input screen on, etc. by the last operation, the

appointed system and the system which carries out highlighting of the the data presuppose that it is the same as that of the case of the individual screen-display procedure 413. Then, the procedure of the input screen display procedure 414 is performed by performing operation double-clicked with a mouse, pressing the Shift key of a keyboard for the character string which was set up as individual screen-display directions and by which operation, for example, the above-mentioned highlighting, was carried out. The above-mentioned character string, a graph, or a graphic symbol may not be chosen directly, but ** may also choose the portion of the space as which patient data has not been displayed yet on the patient flow plan.

[0043]The processing group in the input screen display procedure 414 is shown in drawing 9. In the input screen display procedure 414, the input data specific procedure 4141 is performed first. In Procedure 4141, the kind of patient data in which the operator is asking for the display of an input screen is acquired from the display position of a character string, a graph, or a graphic symbol etc. which are already specified by the operator. When a character string etc. are not specified directly but an unentered margin portion is specified, the kind of patient data corresponding to the position or the nearest graph of a cell of the specified empty is specified. Next, the input screen display procedure 4142 is performed and the input screen of the patient data corresponding to the kind of patient data specified by an operator is displayed. The display example of an input screen is shown in drawing 10. Even when an operator specifies a body temperature graph and operates input screen display instruction as shown in drawing 10 for example, the input screen which summarizes two or more data items, such as the body temperature, the pulse, the breathing rate and diastole blood pressure which usually collect and are inputted, and systole blood pressure, and can be inputted may be displayed. In the input screen 52 of this example, the input stop button 524, the preservation button 525, etc. are contained even with the name-of-patient column 521, the time column 522, and the data input sections 5231-5235. If an input screen is displayed, the input screen operation reception procedure 4143 will be performed, Through the distinction procedure 4144, the input screen redisplay procedure 4145 is performed according to an operator's input, and even Procedures 4143-4145 are repeated until either the input stop button 524 or the preservation button 525 is operated and it ends the display of the input screen 52. Only when either the input stop button 524 or the preservation button 525 was operated, the display of the input screen 52 is ended and the preservation button 525 is operated, the value inputted by the data input sections 5231-5235 is memorized by the memory measure 12 as a value of corresponding patient data. The data input which can be set by the data input sections 5231-5235 makes applicable all methods, such as a selection input which specifies a suitable thing with a mouse etc., and an input using speech recognition, from the text input, the choice registered beforehand, and item list by a keyboard. Although the value currently displayed on the time column 522 in the input screen 52 is memorized, the time series information of patient data, An operator may input this by a keyboard, may adopt the time where the preservation button 525 was operated and patient data was actually saved, and, The value of the time base coordinates in the position which the operator specified on the occasion of operation of input screen display instruction may be adopted, and the

system which uses properly or combines them according to the kind of patient data to input may be registered. The details of processing to Procedures 4143-4145 and explanation of error handling accompanying an input, etc. are omitted. In the above-mentioned embodiment, after the operator specified patient data, whether an individual screen is displayed or an input screen is displayed had distinguished by whether the Shift key of the keyboard is pressed at the time of the double click of a mouse, but. For example, if the time base coordinates of a selection part were the past, when it was the individual screen 51 and the future and the right button of a mouse is pushed after deciding that the input screen 52 is displayed and choosing a part, the shortcut menu which chooses the individual screen 51 or the input screen 52 may be displayed, and it may be made to choose with a mouse.

[0044]As mentioned above, in this embodiment, by choosing a character string, a graph, or a graphic symbol with the above-mentioned patient flow plan, the input screen about the patient data of a desired kind can be displayed easily, and data input work can be performed so that it may understand.

[0045]

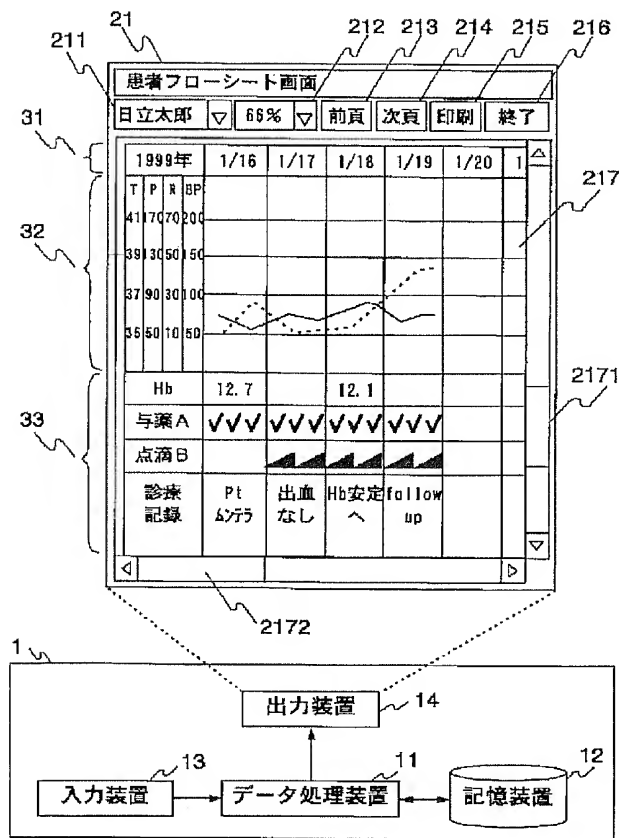
[Effect of the Invention]As mentioned above, in this invention, the electronic chart system which can input or refer to the patient data element of two or more kinds by easier operation is obtained so that it may understand. In particular, the patient data element of two or more kinds is arranged in on a screen based on the kind of patient data, and the information on time, it indicates by package and the electronic chart system with which an operator can grasp progress of a patient's condition easily is obtained. The display scale in the whole time base direction or specific range specified by an operator can be freely changed in the state where the screen which indicated [above-mentioned] by the package is displayed, Even if the density of recorded information, such as the number of times of temperature taking and quantity of a view, changes, the electronic chart system with which an operator can read the above-mentioned patient data easily is obtained. The desired individual screen or input screen of patient data of a kind can be displayed by easier operation in the state where the screen which indicated [above-mentioned] by the package is displayed, and the electronic chart system which can reduce operations of screen switching or a screen scrolling substantially is obtained.

[0046]Therefore, there is a remarkable effect that health care professionals can refer to and input the outline of patient progress and detailed both efficiently.

DRAWINGS

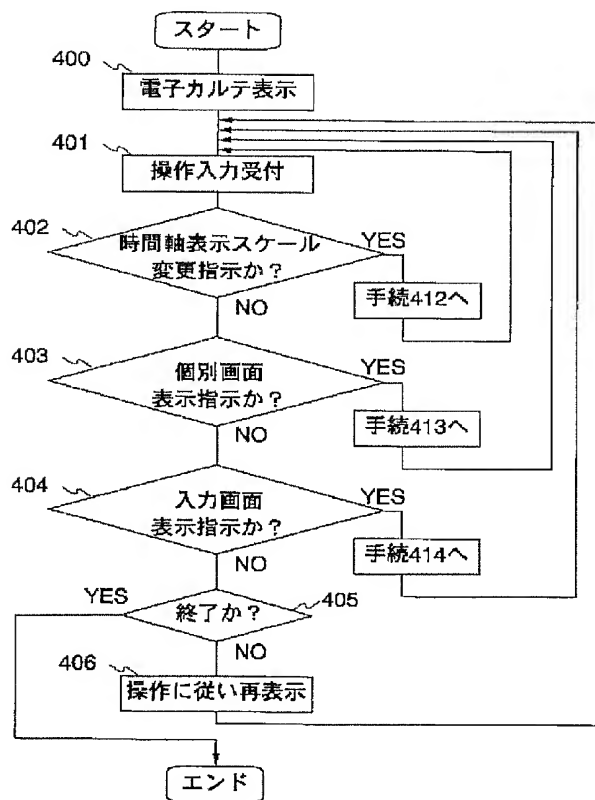
[Drawing 1]

図 1



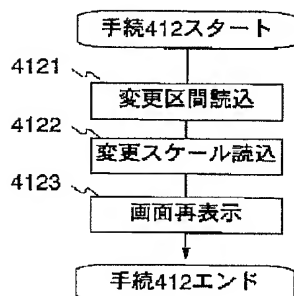
[Drawing 2]

図2



[Drawing 5]

図5



[Drawing 6]

図 6

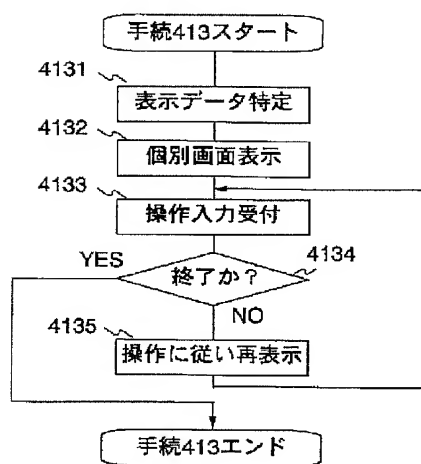
患者フローシート画面

日立太郎 ▾ 56% ▾ 前頁 次頁 印刷 終了

1999年	1/16	1/17~1/23	1/24~31
T			
P			
R			
BP			
41	70	200	
33	30	60	50
37	30	30	100
35	50	10	50
Hb	12.7	1/18 : 12.1	

[Drawing 7]

図 7



[Drawing 3]

図 3

(a)		(b)	
	1/16	1/16	1/17
看護記録	<ul style="list-style-type: none"> ・ 10時 巡視 N.P. ・ 14時 痛みなし ・ 16時 排泄介助 ・ 24時 点残500ml 	<ul style="list-style-type: none"> ・ 10時 巡視 N.P. ・ 14時 痛みなし ・ 16時 排泄介助 	<ul style="list-style-type: none"> 24時 点残500ml ・ 9時 検温

(c)		1/16	1/17
看護記録	10 14 16 時 時 時 巡 痛 排 視 み 泄 N.P な 介 し 助 ml	24 時 点 残 500 ml	9 時 検 温

[Drawing 4]

図 4

(a)

患者フローシート画面									
日立太郎	▽	66%	▽	前頁	次頁	印刷	終了		
1999年	1/16	1/17	1/18	1/19	1/20	1	△		

(b)

患者フローシート画面									
日立太郎	▽	66%	▽	前頁	次頁	印刷	終了		
1999年	1/16	1/17	1/18	1/19	1/20	1	△		

(c)

患者フローシート画面									
日立太郎	▽	66%	▽	前頁	次頁	印刷	終了		
1999年	1/16	1/17	1/18						
T	P	R	BP						
41	70	70	200						
39	30	50	150						
37	90	30	100						
35	50	10	50						
Hb	12.7			12.1					

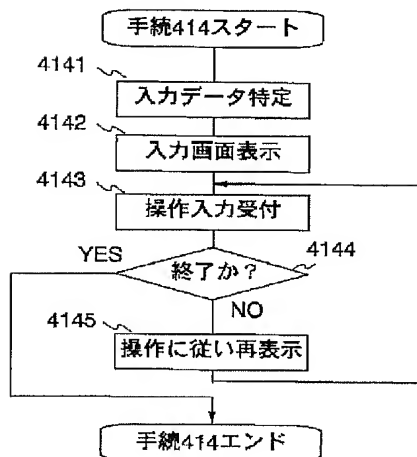
[Drawing 8]

图 8

Figure 1 is a schematic diagram of a medical record individual screen (51). The screen displays a table with columns for date, patient name, and medical notes. The patient name is "日立太郎" (Hitachi Taro). The medical notes include "Ptムンテラ" (Pt Muntel), "出血なし" (No bleeding), "Hb安定へ" (Hb stable), and "Follow up". The screen also features a search bar (511), a search button (512), and a list of search results (513).

[Drawing 9]

图 9



[Drawing 10]

図 10

The diagram illustrates a graphical user interface for entering examination data. The interface is titled "検査データ入力画面" (Examination Data Input Screen). It features a header section with a dropdown menu for the name "日立太郎" (Hitachi Taro), a date and time field "1999/1/20 09:30:00", and two buttons labeled "中止" (Cancel) and "保存" (Save). Below the header, there are five input fields for physiological data: "体温" (Body Temperature), "脈拍" (Pulse), "呼吸" (Respiration), "血圧 (上)" (Blood Pressure (Systolic)), and "血圧 (下)" (Blood Pressure (Diastolic)). Each input field is represented by a rectangular box. To the right of the input fields, there are five labels: "5231", "5232", "5233", "5234", and "5235", which are connected to the respective input fields by lines. The entire interface is enclosed in a rectangular frame.

521 52 522 524 525

検査データ入力画面

日立太郎 ▾ 1999/1/20 09:30:00 中止 保存

体温

脈拍

呼吸

血圧 (上)

血圧 (下)

5231

5232

5233

5234

5235